**CLAIMS** 

What is claimed is:

1. A diversity handover branch control method in a mobile communication

system including a mobile station, a plurality of base stations and a switching center

connected to said plurality of base stations, said method comprising the steps of:

monitoring radio conditions between said mobile station and said plurality of

base stations;

detecting addition branch candidates from not communicating branches when

differences between said monitored radio condition of communicating branch and of

said not communicating branches are smaller than an addition DHO threshold value,

and detecting deletion branches candidates from the communicating branches when

differences between said monitored best radio condition and the other radio condition in

said communicating branches are larger than a deletion DHO threshold value; and

notifying said switching center of information on said detected deletion

branches, or information on said detected addition branch candidates along with their

precedence;

wherein said addition DHO threshold value is different from said deletion DHO

threshold value.

2. The diversity handover control method as claimed in claim 1, wherein

said detecting step detects addition branch candidates based on the best radio condition

in said communication branches and the addition DHO threshold value, when said

mobile station is communicating with base stations via a plurality of communicating

branches.

- Page 36 -

Docket No. 15689.45.1.1

WORKMAN, NYDEGGER & SEELEY
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER

3. The diversity handover control method as claimed in claim 1, wherein

said notifying step notifies said switching center of information on all communicating

branches and said detected addition branch candidates when said deletion branches are

detected.

4. The diversity handover control method as claimed in claim 1, wherein

said notifying step notifies said switching center of information on all said detected

addition branch candidates and all communicating branches when a communicating

radio branch number is not equal to a simultaneously establishable maximum radio

branch number.

5. The diversity handover control method as claimed in claim 1, wherein

said notifying step notifies said switching center of information on addition branch

candidates having the radio condition exceeding the worst radio condition of

communicating branches by the threshold value.

00 EA SALT LAI

- Page 37 -